

SEQUENCE LISTING

<110> Summar, Marshall L.

Christman, Brian

<120> THERAPEUTIC METHODS RELATING TO
CARBAMYL PHOSPHATE SYNTHETASE I POLYMORPHISM

<130> 1242-19-2 CIP Sequence Listing

<140>

<141>

<150> 09/585,077

<151> 2000-06-01

<160> 20

<170> PatentIn Ver. 2.0

<210> 1

<211> 5761

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (124)..(4626)

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Val Ala Trp Pro Ser Gln Glu Gly Gln Asn Pro Ser Leu Ser Ser Ile	
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His Pro Ser Ile Glu Gly Phe Thr Pro Arg Leu Pro Met Asn Lys Glu
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Ala Ala Asp Thr Ile Gly Tyr Pro Val Met Ile Arg Ser Ala Tyr Ala	
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Leu Gly Gly Leu Gly Ser Gly Ile Cys Pro Asn Arg Glu Thr Leu Met	
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Asp Leu Ser Thr Lys Ala Phe Ala Met Thr Asn Gln Ile Leu Val Glu	
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Met Gly Val His Thr Gly Asp Ser Val Val Val Ala Pro Ala Gln Thr	
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Leu Ser Asn Ala Glu Phe Gln Met Leu Arg Arg Thr Ser Ile Asn Val	
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His Pro Thr Ser Met Glu Tyr Cys Ile Ile Glu Val Asn Ala Arg Leu	
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Phe Ile Ala Ala Lys Ile Ala Leu Gly Ile Pro Leu Pro Glu Ile Lys	
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Asn Val Val Ser Gly Lys Thr Ser Ala Cys Phe Glu Pro Ser Leu Asp	
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Tyr Met Val Thr Lys Ile Pro Arg Trp Asp Leu Asp Arg Phe His Gly	
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Cys His Pro Ser Ile Glu Gly Phe Thr Pro Arg Leu Pro Met Asn Lys	
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Thr Arg Glu Leu Arg Leu Lys Lys Asn Ile His Pro Trp Val Lys Gln	
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Ile Asp Thr Leu Ala Ala Glu Tyr Pro Ser Val Thr Asn Tyr Leu Tyr	
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Val Thr Tyr Asn Gly Gln Glu His Asp Val Asn Phe Asp Asp His Gly	
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Val	Leu	Glu	Asp	Gly	Thr	Lys	Met	Lys	Gly	Tyr	Ser	Phe	Gly	His	Pro
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Ser	Ser	Val	Ala	Gly	Glu	Val	Val	Phe	Asn	Thr	Gly	Leu	Gly	Gly	Tyr
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Pro	Glu	Ala	Ile	Thr	Asp	Pro	Ala	Tyr	Lys	Gly	Gln	Ile	Leu	Thr	Met
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Asp	Glu	Leu	Gly	Leu	Ser	Lys	Tyr	Leu	Glu	Ser	Asn	Gly	Ile	Lys	Val
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Gly Thr Met Leu Gly Lys Ile Glu Phe Glu Gly Gln Pro Val Asp Phe
180 185 190

Val Asp Pro Asn Lys Gln Asn Leu Ile Ala Glu Val Ser Thr Lys Asp
195 200 205

Val Lys Val Tyr Gly Lys Gly Asn Pro Thr Lys Val Val Ala Val Asp
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Cys Gly Ile Lys Asn Asn Val Ile Arg Leu Leu Val Lys Arg Gly Ala
225 230 235 240

Glu Val His Leu Val Pro Trp Asn His Asp Phe Thr Lys Met Glu Tyr
245 250 255

Asp Gly Ile Leu Ile Ala Gly Gly Pro Gly Asn Pro Ala Leu Ala Glu
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Pro Leu Ile Gln Asn Val Arg Lys Ile Leu Glu Ser Asp Arg Lys Glu
275 280 285

Pro Leu Phe Gly Ile Ser Thr Gly Asn Leu Ile Thr Gly Leu Ala Ala
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Gly Ala Lys Thr Tyr Lys Met Ser Met Ala Asn Arg Gly Gln Asn Gln
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Pro Val Leu Asn Ile Thr Asn Lys Gln Ala Phe Ile Thr Ala Gln Asn
325 330 335

His Gly Tyr Ala Leu Asp Asn Thr Leu Pro Ala Gly Trp Lys Pro Leu
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Phe Val Asn Val Asn Asp Gln Thr Asn Glu Gly Ile Met His Glu Ser
355 360 365

Lys Pro Phe Phe Ala Val Gln Phe His Pro Glu Val Thr Pro Gly Pro
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Ile Asp Thr Glu Tyr Leu Phe Asp Ser Phe Phe Ser Leu Ile Lys Lys
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Gly Gly Leu Gly Ser Gly Ile Cys Pro Asn Arg Glu Thr Leu Met Asp
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Gly Val His Thr Gly Asp Ser Val Val Val Ala Pro Ala Gln Thr Leu
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Arg His Leu Gly Ile Val Gly Glu Cys Asn Ile Gln Phe Ala Leu His
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 Thr Gly Phe Gly Phe Thr Asn Val Thr Ala His Gln Lys Trp Lys Phe
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 Ser Arg Pro Gly Ile Arg Leu Leu Ser Val Lys Ala Gln Thr Ala His
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 Ile Val Leu Glu Asp Gly Thr Lys Met Lys Gly Tyr Ser Phe Gly His
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Tyr Pro Glu Ala Ile Thr Asp Pro Ala Tyr Lys Gly Gln Ile Leu Thr	
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Gln Pro Val Leu Asn Ile Thr Asn Lys Gln Ala Phe Ile Thr Ala Gln	
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His Pro Thr Ser Met Glu Tyr Cys Ile Ile Glu Val Asn Ala Arg Leu	
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Lys	Pro	Phe	Phe	Ala	Val	Gln	Phe	His	Pro	Glu	Val	Thr	Pro	Gly	Pro		
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Ala	Ser	Arg	Val	Glu	Val	Ser	Lys	Val	Leu	Ile	Leu	Gly	Ser	Gly	Gly		
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Leu	Ser	Ile	Gly	Gln	Ala	Gly	Glu	Phe	Asp	Tyr	Ser	Gly	Ser	Gln	Ala		
		435					440					445					
Val	Lys	Ala	Met	Lys	Glu	Glu	Asn	Val	Lys	Thr	Val	Leu	Met	Asn	Pro		
	450					455					460						
Asn	Ile	Ala	Ser	Val	Gln	Thr	Asn	Glu	Val	Gly	Leu	Lys	Gln	Ala	Asp		
465				470						475				480			
Thr	Val	Tyr	Phe	Leu	Pro	Ile	Thr	Pro	Gln	Phe	Val	Thr	Glu	Val	Ile		
			485					490					495				
Lys	Ala	Glu	Gln	Pro	Asp	Gly	Leu	Ile	Leu	Gly	Met	Gly	Gly	Gln	Thr		
			500					505					510				
Ala	Leu	Asn	Cys	Gly	Val	Glu	Leu	Phe	Lys	Arg	Gly	Val	Leu	Lys	Glu		
		515					520					525					
Tyr	Gly	Val	Lys	Val	Leu	Gly	Thr	Ser	Val	Glu	Ser	Ile	Met	Ala	Thr		
	530					535						540					

Glu Asp Arg Gln Leu Phe Ser Asp Lys Leu Asn Glu Ile Asn Glu Lys
545 550 555 560

Ile Ala Pro Ser Phe Ala Val Glu Ser Ile Glu Asp Ala Leu Lys Ala
565 570 575

Ala Asp Thr Ile Gly Tyr Pro Val Met Ile Arg Ser Ala Tyr Ala Leu
580 585 590

Gly Gly Leu Gly Ser Gly Ile Cys Pro Asn Arg Glu Thr Leu Met Asp
595 600 605

Leu Ser Thr Lys Ala Phe Ala Met Thr Asn Gln Ile Leu Val Glu Lys
610 615 620

Ser Val Thr Gly Trp Lys Glu Ile Glu Tyr Glu Val Val Arg Asp Ala
625 630 635 640

Asp Asp Asn Cys Val Thr Val Cys Asn Met Glu Asn Val Asp Ala Met
645 650 655

Gly Val His Thr Gly Asp Ser Val Val Val Ala Pro Ala Gln Thr Leu
660 665 670

Ser Asn Ala Glu Phe Gln Met Leu Arg Arg Thr Ser Ile Asn Val Val
675 680 685

Arg His Leu Gly Ile Val Gly Glu Cys Asn Ile Gln Phe Ala Leu His
690 695 700

Pro Thr Ser Met Glu Tyr Cys Ile Ile Glu Val Asn Ala Arg Leu Ser
705 710 715 720

Arg Ser Ser Ala Leu Ala Ser Lys Ala Thr Gly Tyr Pro Leu Ala Phe
725 730 735

Ile Ala Ala Lys Ile Ala Leu Gly Ile Pro Leu Pro Glu Ile Lys Asn
740 745 750

Val Val Ser Gly Lys Thr Ser Ala Cys Phe Glu Pro Ser Leu Asp Tyr
755 760 765

Met Val Thr Lys Ile Pro Arg Trp Asp Leu Asp Arg Phe His Gly Thr
770 775 780

Ser Ser Arg Ile Gly Ser Ser Met Lys Ser Val Gly Glu Val Met Ala
785 790 795 800

Ile Gly Arg Thr Phe Glu Glu Ser Phe Gln Lys Ala Leu Arg Met Cys
805 810 815

His Pro Ser Ile Glu Gly Phe Thr Pro Arg Leu Pro Met Asn Lys Glu
820 825 830

Trp Pro Ser Asn Leu Asp Leu Arg Lys Glu Leu Ser Glu Pro Ser Ser
835 840 845

Thr	Arg	Ile	Tyr	Ala	Ile	Ala	Lys	Ala	Ile	Asp	Asp	Asn	Met	Ser	Leu	850	855	860	
Asp	Glu	Ile	Glu	Lys	Leu	Thr	Tyr	Ile	Asp	Lys	Trp	Phe	Leu	Tyr	Lys	865	870	875	880
Met	Arg	Asp	Ile	Leu	Asn	Met	Glu	Lys	Thr	Leu	Lys	Gly	Leu	Asn	Ser	885	890	895	
Glu	Ser	Met	Thr	Glu	Glu	Thr	Leu	Lys	Arg	Ala	Lys	Glu	Ile	Gly	Phe	900	905	910	
Ser	Asp	Lys	Gln	Ile	Ser	Lys	Cys	Leu	Gly	Leu	Thr	Glu	Ala	Gln	Thr	915	920	925	
Arg	Glu	Leu	Arg	Leu	Lys	Lys	Asn	Ile	His	Pro	Trp	Val	Lys	Gln	Ile	930	935	940	
Asp	Thr	Leu	Ala	Ala	Glu	Tyr	Pro	Ser	Val	Thr	Asn	Tyr	Leu	Tyr	Val	945	950	955	960
Thr	Tyr	Asn	Gly	Gln	Glu	His	Asp	Val	Asn	Phe	Asp	Asp	His	Gly	Met	965	970	975	
Met	Val	Leu	Gly	Cys	Gly	Pro	Tyr	His	Ile	Gly	Ser	Ser	Val	Glu	Phe	980	985	990	
Asp	Trp	Cys	Ala	Val	Ser	Ser	Ile	Arg	Thr	Leu	Arg	Gln	Leu	Gly	Lys	995	1000	1005	
Lys	Thr	Val	Val	Val	Asn	Cys	Asn	Pro	Glu	Thr	Val	Ser	Thr	Asp	Phe	1010	1015	1020	
Asp	Glu	Cys	Asp	Lys	Leu	Tyr	Phe	Glu	Glu	Leu	Ser	Leu	Glu	Arg	Ile	1025	1030	1035	1040
Leu	Asp	Ile	Tyr	His	Gln	Glu	Ala	Cys	Gly	Gly	Cys	Ile	Ile	Ser	Val	1045	1050	1055	
Gly	Gly	Gln	Ile	Pro	Asn	Asn	Leu	Ala	Val	Pro	Leu	Tyr	Lys	Asn	Gly	1060	1065	1070	
Val	Lys	Ile	Met	Gly	Thr	Ser	Pro	Leu	Gln	Ile	Asp	Arg	Ala	Glu	Asp	1075	1080	1085	
Arg	Ser	Ile	Phe	Ser	Ala	Val	Leu	Asp	Glu	Leu	Lys	Val	Ala	Gln	Ala	1090	1095	1100	
Pro	Trp	Lys	Ala	Val	Asn	Thr	Leu	Asn	Glu	Ala	Leu	Glu	Phe	Ala	Lys	1105	1110	1115	1120
Ser	Val	Asp	Tyr	Pro	Cys	Leu	Leu	Arg	Pro	Ser	Tyr	Val	Leu	Ser	Gly	1125	1130	1135	
Ser	Ala	Met	Asn	Val	Val	Phe	Ser	Glu	Asp	Glu	Met	Lys	Lys	Phe	Leu	1140	1145	1150	

Glu Glu Ala Thr Arg Val Ser Gln Glu His Pro Val Val Leu Thr Lys
1155 1160 1165

Phe Val Glu Gly Ala Arg Glu Val Glu Met Asp Ala Val Gly Lys Asp
1170 1175 1180

Gly Arg Val Ile Ser His Ala Ile Ser Glu His Val Glu Asp Ala Gly
1185 1190 1195 1200

Val His Ser Gly Asp Ala Thr Leu Met Leu Pro Thr Gln Thr Ile Ser
1205 1210 1215

Gln Gly Ala Ile Glu Lys Val Lys Asp Ala Thr Arg Lys Ile Ala Lys
1220 1225 1230

Ala Phe Ala Ile Ser Gly Pro Phe Asn Val Gln Phe Leu Val Lys Gly
1235 1240 1245

Asn Asp Val Leu Val Ile Glu Cys Asn Leu Arg Ala Ser Arg Ser Phe
1250 1255 1260

Pro Phe Val Ser Lys Thr Leu Gly Val Asp Phe Ile Asp Val Ala Thr
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Lys Val Met Ile Gly Glu Asn Val Asp Glu Lys His Leu Pro Thr Leu
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Asp His Pro Ile Ile Pro Ala Asp Tyr Val Ala Ile Lys Ala Pro Met
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Phe Ser Trp Pro Arg Leu Arg Asp Ala Asp Pro Ile Leu Arg Cys Glu
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Met Ala Ser Thr Gly Glu Val Ala Cys Phe Gly Glu Gly Ile His Thr
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Ala Phe Leu Lys Ala Met Leu Ser Thr Gly Phe Lys Ile Pro Gln Lys
1345 1350 1355 1360

Gly Ile Leu Ile Gly Ile Gln Gln Ser Phe Arg Pro Arg Phe Leu Gly
1365 1370 1375

Val Ala Glu Gln Leu His Asn Glu Gly Phe Lys Leu Phe Ala Thr Glu
1380 1385 1390

Ala Thr Ser Asp Trp Leu Asn Ala Asn Asn Val Pro Ala Asn Pro Val
1395 1400 1405

Ala Trp Pro Ser Gln Glu Gly Gln Asn Pro Ser Leu Ser Ser Ile Arg
1410 1415 1420

Lys Leu Ile Arg Asp Gly Ser Ile Asp Leu Val Ile Asn Leu Pro Asn
1425 1430 1435 1440

Asn Asn Thr Lys Phe Val His Asp Asn Tyr Val Ile Arg Arg Thr Ala
1445 1450 1455

Val Asp Ser Gly Ile Pro Leu Leu Thr Asn Phe Gln Val Thr Lys Leu
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Phe Ala Glu Ala Val Gln Lys Ser Arg Lys Val Asp Ser Lys Ser Leu
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Phe His Tyr Arg Gln Tyr Ser Ala Gly Lys Ala Ala
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